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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,919	06/30/2000	Seyfullah H. Oguz	EMCR:060	2702

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EXAMINER

CHIEU, PO LIN

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,919

Applicant(s)

OGUZ ET AL.

Examiner

Polin Chieu

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-9,12-16,19-22,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 3,4,10,11,17,18,23 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2,4,5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings were received on 7/13/01. These drawings are accepted.

Claim Objections

2. Claims 11 and 15-16 objected to because of the following informalities: claim 11 recites an "APU", not previously defined in the claims. Based on the specifications an APU is an audio presentation unit, which is disclosed in claim 10. The examiners suggest providing APU in parentheses in claim 10. Claim 15 recites "ACT" in line 7. The examiner believes that "ACT" should be replaced with "AC". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 12-13, 15, 19, 22, and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawada et al (6,219,381).

Regarding claim 12, Sawada et al discloses a main file containing data of an MPEG transport stream including a groups of pictures (GOPs), each GOP including an original-quality I frame and a plurality of P or B frames (col. 1, lines 1-57; I, P, and B frames are well known in MPEG2); a fast forward file containing data of a fast forward MPEG transport stream including GOPs, each GOP in the fast forward file corresponding to a GOP in the main file and including at least one reduced quality I frame corresponding to the original quality I frame in the corresponding GOP of the main file (col. 4, line 18 – col. 7, line 15); the fast reverse file containing data of a fast reverse MPEG transport stream including GOPs, each GOP in the fast reverse file corresponding to a GOP in the main file and including at least one reduced quality I frame corresponding to the original quality I frame in the corresponding GOP of the main file (col. 8, lines 36-47); wherein a reading of the main file produces an MPEG transport stream for an audio-visual presentation at a normal rate (fig. 2), a reading of the fast forward file produces an MPEG transport stream of the audio-visual presentation in a forward direction at a fast rate, and a reading of the fast reverse file produces an MPEG transport stream of audio visual presentation in a reverse direction at a fast rate (col. 9, lines 52-65).

Regarding claim 13, Sawada et al discloses that the reduced quality I frames in the fast reverse file are copies of the reduced quality I frames in the fast forward file (col. 4, line 18 – col. 7, line 15).

Regarding claim 15, Sawada et al discloses that each I frame in the main file, fast forward file, and in the fast reverse file includes a plurality of 8X8 blocks, the 8X8

block each having a variable number of non-zero AC discrete cosine transform (DCT) coefficients, the non-zero AC DCT coefficients of each 8X8 block in an I frame of the fast forward file and of the fast reverse file also appear in a corresponding 8X8 block of a corresponding I frame of the main file, and wherein a limited number of the non-zero AC DCT coefficients in the 8X8 blocks of the I frames in the main file appear in the corresponding 8X8 blocks of the corresponding I frames in the fast forward file and the fast reverse file (col. 4, lines 18-67).

Regarding claim 19, Sawada et al discloses a file server (fig. 3) containing a main file, fast forward file, and fast reverse file (as discussed previously). Further, Sawada et al disclose that the file server is programmed to respond to a client request for an audio visual presentation at a normal rate by reading the main file and streaming MPEG data from the main file to the client (fig. 2); the file server is programmed to respond to a client request for the audio visual presentation in a forward direction at a fast rate by reading the fast forward file and streaming MPEG data from the fast forward file to the client (col. 9, lines 52-65); and the file server is programmed to respond to a client request for the audio visual presentation in a reverse order at a fast rate by reading the fast reverse file and streaming MPEG data from the fast reverse file to the client (col. 9, lines 52-65).

Regarding claim 22, Sawada et al discloses that the file server is programmed to allocate a volume for the main file, the fast forward file, and the fast reverse file when the main file is ingested into the file server (col. 4, line 18 – col. 7, line 15).

Regarding claim 25, Sawada et al discloses that the file server is programmed to produce the fast forward file and the fast reverse file from the main file ingested during the copy in operation (col. 4, line 18 – col. 7, line 15).

Regarding claim 26, Sawada et al discloses that the file server is further programmed to permit clients to access the main file (fig. 2) but neither the fast forward file nor the fast reverse file via read and write file access commands (col. 9, lines 52-65; i.e. user accesses the trick play files using trick play commands).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 6-7, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al in view of Krause et al (5,949,948).

Regarding claims 1, 7, 9, and 14, Sawada et al discloses a method of processing original quality MPEG coded video to produce reduced quality MPEG coded video for trick mode operation (fig. 5), the MPEG coded video including a set of non-zero AC DCT coefficients for 8X8 blocks in I frames of the MPEG coded video (col. 4, lines 18-67), the method including the step of removing non-zero AC DCT coefficients from the 8X8 blocks of I frames of the MPEG coded video to produce I frames of reduced quality

MPEG coded video (col. 11, lines 16-50). However, Sawada et al does not disclose inserting freeze frames in the reduced quality MPEG coded video.

Krause et al teaches repeating a frame during trick play (col. 3, lines 25-61). Krause et al teaches a specific example in which one freeze frame per I frame is provided.

It would have been highly desirable to insert freeze frames so that decoding limitations caused by frame types can be avoided during trick play (col. 3, lines 25-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to insert freeze frames in the device of Sawada et al.

Regarding claim 2, Sawada et al discloses ingesting the original quality MPEG coded video into a file server and storing original quality MPEG coded video in a main file, producing I frames of reduced quality MPEG coded video from the original quality MPEG coded video ingested into the file server, and storing the I frames of reduced quality MPEG video in at least one trick mode file in the file server (col. 4, line 18 – col. 7, line 15).

Regarding claim 6, the main file, fast forward file, and fast reverse file were previously discussed in the art rejection of claim 12. Please refer to the art rejection of claim 12.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al in view of Krause et al and Porter et al (5,659,539).

Regarding claim 5, Sawada et al does not disclose seamless splicing.

Porter teaches responding to a client video access request by seamless splicing between an MPEG coded video stream from the main file and an MPEG coded video stream from the trick mode file (col. 2, line 59 – col. 3, line 5).

It would have been highly desirable to have seamless splicing so that the user can switch between a trick play mode and a normal play mode.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have seamless splicing in the device of Sawada et al.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al in view of Krause et al and Hamamoto et al (5,953,486).

Regarding claim 8, Sawada et al discloses reducing the AC DCT coefficients. However, Sawada et al does not explicitly disclose that no more than about nine AC DCT coefficients per 8X8 block are retained in the I frames of reduced quality MPEG coded video.

Hamamoto et al teaches that no more than about nine AC DCT coefficients per 8X8 block are retained in the I frames of reduced quality MPEG coded video col. 16, lines 25-42).

It would have been highly desirable to have no more than nine AC DCT coefficients so that the decoding time is fast for trick play decoding.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have no more than nine AC DCT coefficients in the device of Sawada et al.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al in view Hamamoto et al.

The limitations of claim 16 were discussed in the art rejection of claim 8. Please refer to the art rejection of claim 8.

10. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al in view of Porter et al.

The limitations of claims 20-21 were discussed in the art rejection of claim 5. Please refer to the art rejection of claim 5.

Allowable Subject Matter

11. Claims 3-4, 10-11, 17-18, and 23-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McLaren and Gordon et al disclose trick play devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Polin Chieu whose telephone number is (703) 308-6070. The examiner can normally be reached on M-Th 8:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B. Christensen can be reached on (703) 308-9644. The fax phone

numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any response to this action should be mailed to:

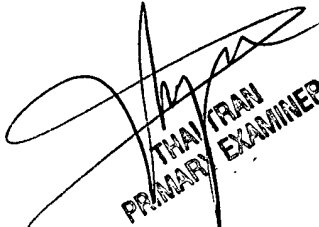
Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

PC
May 14, 2004



THAI TRAN
PRIMARY EXAMINER